



Fall Quarterly Meeting

Featuring Dr. Joan Stevens,
Agilent Technologies

***QuEChERS 101: The How, What, Where and Why
of a Rapid Sample Preparation Technique***

Wednesday, October 19, 2011

Appetizers: 6:30 pm

Talk: 7:00 pm

Location

Katz Analytical Services

2489 Rice Street, Lower Level Conference Room

Roseville, MN

For directions, see point "A" on the attached map.

Abstract

QuEChERS is a sample preparation technique that came to fruition in 2003, based on the efforts of scientists from USDA and EU food regulatory agencies. QuEChERS stands for **Quick, Easy, Cheap, Effective, Rugged, and Safe** technique. Their primary goal was to develop a single method for the analysis of multi-classes of pesticides in food products; since at the time the primary sample preparation technique involved multiple Solid Phase Extraction (SPE) methods. QuEChERS is as easy as 1-2-3.

- 1) Extraction of compounds from product with excess salts
- 2) Dispersive SPE of the extract to remove interfering matrix effects
- 3) Analysis by either GC or LC and MS, MS/MS

Those who are new to QuEChERS will gain a basic understanding of the method and its benefits, and those who are experienced will learn about new advances and optimization of the methodology. Therefore we will discuss in detail the QuEChERS extraction procedure from the point of product arrival through extraction, dispersive SPE and on to analysis. Factors that affect recovery and increase throughput will be presented in addition to future applications for QuEChERS, reaching far beyond pesticides in food products.

Biography

Dr. Stevens earned a Bachelors of Arts degree in Chemistry from the College of Wooster, a Ph.D. in Medicinal Chemistry from The Ohio State University, College of Pharmacy and conducted postdoctoral research at Purdue University. She joined Agilent as a Sample Preparation Applications Scientist in the Chemistries and Supplies Division (CSD) on April 1, 2009. Prior to Agilent was associated with Gilson, Inc. where she worked from 1989 to 2009 in Technical Sales and Support, as well as a Technical

Support Manager and an Applications Manager. During her 19+ years, Dr. Stevens worked closely with customers, sales and technical support personnel, as well as state, federal and local government agencies on various projects. She was directly responsible for the work and applications that were presented at technical conferences in US, Canada and Europe. Several applications were also published in the area of sample preparation and chromatographic method development. Since being at Agilent, Dr. Stevens has been an integral part in Agilent's success and becoming the market leader in QuEChERS. She has published over 30 application notes since 2009 and has been directly involved in 25+ application collaborations, and presented work at all major conferences. She has conducted numerous eSeminars, videos and classes on sample preparation for customers worldwide; and is directly involved with supporting and assisting individual customers with sample preparation needs. Dr. Steven's goals are to involve researchers actively in sample preparation, and therefore eliciting an understanding how sample preparation can optimize research and results.

